# Mechanical Working Instruction

Applicable for R320s and R320sc

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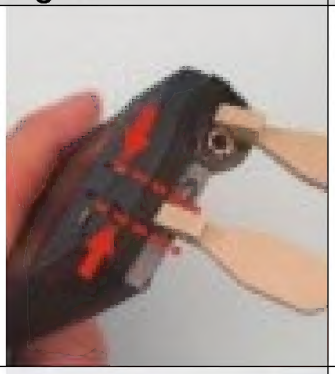
# 1 Disassembly

## 1.1 Process tools

Torque screwdriver, torx no.6 pre-set to 33 Ncm., front opening tool, side-opening tool

## 1.2 Instructions

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the battery. | Keep all contact-surfaces/display clean of skin oil. Use gloves! |
| 2 | | Remove the antenna by waging laterally and pulling it out from the phone | Do not break, the antenna holder/connector may be damaged. |
| 3 | | Slide in a top tool under the front. Make sure that it's pushed in to the stop on the tool | |
| 4 | | Push in the other top tool right beside of the antenna house. Push until a snap is heard. Remove the tool | Don't bend with the tool just push. |

| # | Figure | Instruction | Note |
|---|---|---|---|
| 5 |  | Slide in the top tool under the front between the LED-diode and the buzzer holes | |
| 6 | | Place the side-opening tool in the gap at the top on the phone and slide it down the phone. Make sure that the tool always has contact with the frame under this operation. Repeat with the other side | |
| 7 | | Open the phone at the top a little bit and wobble the frame sideways to loosen the frame | |
| 8 | | Remove the four display assembly screws | |
| 9 | | Remove the display assembly and place it on the ESD-protected surface | |
| 10 | | Remove the three board screws. | |
| 11 | | Remove the board and the metal-gasket carefully from the frame. | Make sure the SIM-card is removed |

# 2 Reassembly

## 2.1 Process tools

Torque screwdriver, torx no.6 pre-set to 33 Ncm.

## 2.2 Instructions

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Control every contact-surfaces on the board is cleans and not damaged. | Keep all contact-surfaces/display clean of skin oil. Use gloves! |
| 2 | | Place the metal gasket and the board on the frame | Be careful with the metal gasket it will easily be bent |
| 3 | | Mount the three board screws and tighten with the torque screwdriver | |
| 4 | | Control it is no dust/dirt on the display El-lamp or on the backside of the display. | |
| 5 | | Place the display assembly on the board | |
| 6 | | Mount the four display assembly screws and tighten them with the torque screw-driver | Always exchange the elastomeric-connector |
| 7 | | Make a visual control there is no fissures in the front cover and its snap-holders | |
| 8 | | Control it is no dust/dirt on the display or inside of the front | |

| # | Figure | Instruction | Note |
|---|---|---|---|
| 9 | | Mount the phone by first pushing the frame into the top of the front | |
| 10 | | Press the phone together and control that's where is no gap between front and frame | |
| 11 | | Push the volume button up and down to secure it snapped in to the volume-switch | |
| 12 | | Mount the antenna and the battery | |

# 3 Replacement, Mechanical Parts

## 3.1 Volume button

### 3.1.1 Instructions

- No *Disassembly* or *Reassembly.*

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the volume button by pressing in your nail between the button and the front and pull carefully outwards | |
| 2 | | Be careful, not to damage the front and control that no snapholders comes loose and stays inside the phone. | |
| 3 | | Mount the new volume button place the two upper snap-holders first and then push in the other side | |
| 4 | | The triangle arrow inside the button will point upward | |
| 5 | | Push the volume button up and down to secure it snapped onto the volume switch | |

# 3.2 Front cover

## 3.2.1 Process tools

Tweezers.

## 3.2.2 Instructions

- Dismount the phone as described in 1 Disassembly, step 1-7.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the keyboard from the front cover. | |
| 2 | | Take a new front cover and mount the keyboard | |
| 3 | | Remove the protections gasket inside the window | |

- Mount the phone as described in 2 Reassembly, step 8-12.

# 3.3 Buzzer gasket

## 3.3.1 Process tools

Tweezers.

## 3.3.2 Instructions

- Dismount the phone as described in 1 Disassembly, step 1-7.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the gasket from the front cover with a tweezers | |
| 2 | | Take a new buzzer gasket | |
| 3 | | Remove the protection tape and mount the gasket | Check that the adhesive on the gasket does not cover the sound channel |

- Mount the phone as described in 2 Reassembly, step 7-12.

# 3.4 Keyboard

## 3.4.1 Instructions

- Dismount the phone as described in 1 Disassembly, step 1-7.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Replace the old keyboard in the front with a new keyboard | |

- Mount the phone as described in 2 Reassembly, step 7-12.

# 3.5 Display assembly

## 3.5.1 Process tools

Tweezers.

## 3.5.2 Instructions

- Dismount the phone as described in 1 Disassembly, step 1 - 9.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Press the loudspeaker through the hole in the old carrier | |
| 2 | | Take a new package of the display assembly | |
| 3 | | Take a new elastomeric connector and mount it in the holder inside the carrier. Press the elastomeric connector into the hole with your finger | Do not touch the elastomeric connector with your hands use gloves |
| 4 | | Mount a new gasket carefully onto the carrier | |
| 5 | | Mount a new loudspeaker with a speaker support in the cavity and press without pressing on the LCD or the gasket | |

- Mount the phone as described in 2 Reassembly, step 4-12.

# 3.6 Loudspeaker

## 3.6.1 Process tools

Tweezers

## 3.6.2 Instructions

- Dismount the phone as described in 1 Disassembly, step 1 - 9.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Press the loudspeaker through the hole in the carrier | Do not touch the display or contact surface with your fingers use gloves |
| 2 | | Remove the old loudspeaker gasket carefully | |
| 3 | | Mount a new gasket carefully onto the carrier | |
| 4 | | Mount a new loudspeaker in the cavity and press without pressing on the LCD or the gasket | |

| # | Figure | Instruction | Note |
|---|---|---|---|
| 5 | | Mount a new speaker support make sure that it doesn't cover the hole in the speaker | Always exchange the elastomeric-connector |

- Mount the phone as described in 2 Reassembly, step 4-12.

# 3.7 Elastomeric connector

## 3.7.1 Process tools

Tweezers

## 3.7.2 Instructions

- Dismount the phone as described in 1 Disassembly, step 1 - 9.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the old elastomeric-connector | |
| 2 | | Take a new elastomeric-connector with a tweezers and place it in the holder. Press the connector into the hole with your finger | |

- Mount the phone as described in 2 Reassembly, step 4-12.

# 3.8 Vibrator assembly

## 3.8.1 Process tools

Tweezers

## 3.8.2 Instructions

- Dismount the phone as described in 1 Disassembly, step 1 – 11.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the vibrator-assembly with a pair of tweezers | |
| 2 | | Place the new vibrator-assembly. Make sure that it is pushed down properly | |

- Mount the phone as described in 2 Reassembly, step 1 - 12

# 3.9 Antenna

## 3.9.1 Instructions

- No Disassembly or Reassembly.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the antenna by carefully waging laterally and pulling it out from the phone | |
| 2 | | Take a new antenna. Place it in the antenna house and push until a click is heard | |

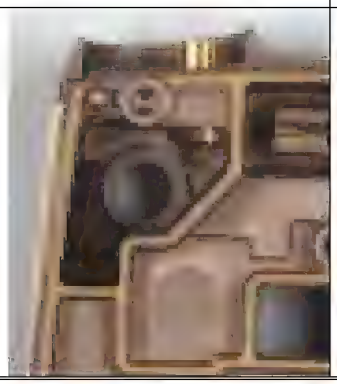
# 3.10 Plug

## 3.10.1 Process tools

Tweezers

## 3.10.2 Instructions

- Dismount the phone as described in 1 Disassembly, step 1 - 11.

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the plug | |
| 2 | | Take a new plug | |
| 3 |  | Mount the plug into the specific cavity in the frame | |

- Mount the phone as described in 2 Reassembly, step 1 - 12

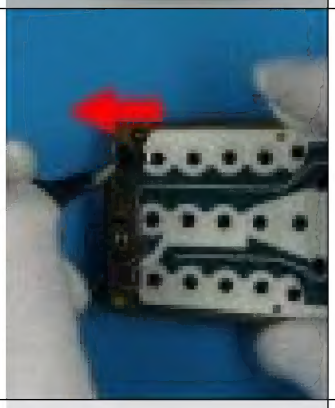
# 3.11 Microphone

## 3.11.1 Process tools

Tweezers

## 3.11.2 Instructions

- Dismount the phone as described in 1 Disassembly, step1 – 7

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the screw beside the microphone | |
| 2 |  | Remove the microphone tube by sliding it of | |
| 3 | | Gently lift the dome switch with a tweezers without creasing it | |
| 4 | | Remove the microphone by turning the board upside down | |

| # | Figure | Instruction | Note |
|---|---|---|---|
| 5 | | Mount a new microphone and new microphone tube | Make sure that the gold-plated side of the microphone is turned downwards and that the tube is pushed all the way in. |
| 6 | | Press the dome switch back with a thumb | |

- Mount the phone as described in 2 Reassembly, step 7-12

# 3.12 Microphone grommet

## 3.12.1 Process tools

Tweezers

## 3.12.2 Instructions

- Dismount the phone as described in 1 Disassembly, step1 – 7

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the microphone grommet use a pair of tweezers | |
| 2 | | Mount a new microphone grommet | |

- Mount the phone as described in 2 Reassembly, step 7-12

# 4 Warranty Seal

## 4.1 Process Tools

Tweezers

## 4.2 Instructions

| # | Figure | Instruction | Note |
|---|---|---|---|
| 1 | | Remove the antenna | |
| 2 | | Mount the warranty seal in the antenna house | |
| 3 | | It is important that the warranty seal is not to stretched or to slacked mounted | |
| 4 | | Mount the antenna | |

# 5 Revision History

| Rev. | Date | Changes / Comments |
|---|---|---|
| A | 2000-01-17 | First release |
| B | 2000-01-26 | Changes in chapter 1.1 |
| C | 2000-03-04 | Changes in chapter 1.1 and 2.2 |
| D | 2000-04-11 | Changes in chapter 1.1.2, 2.2.2 , 3..9.1 and layout changes |